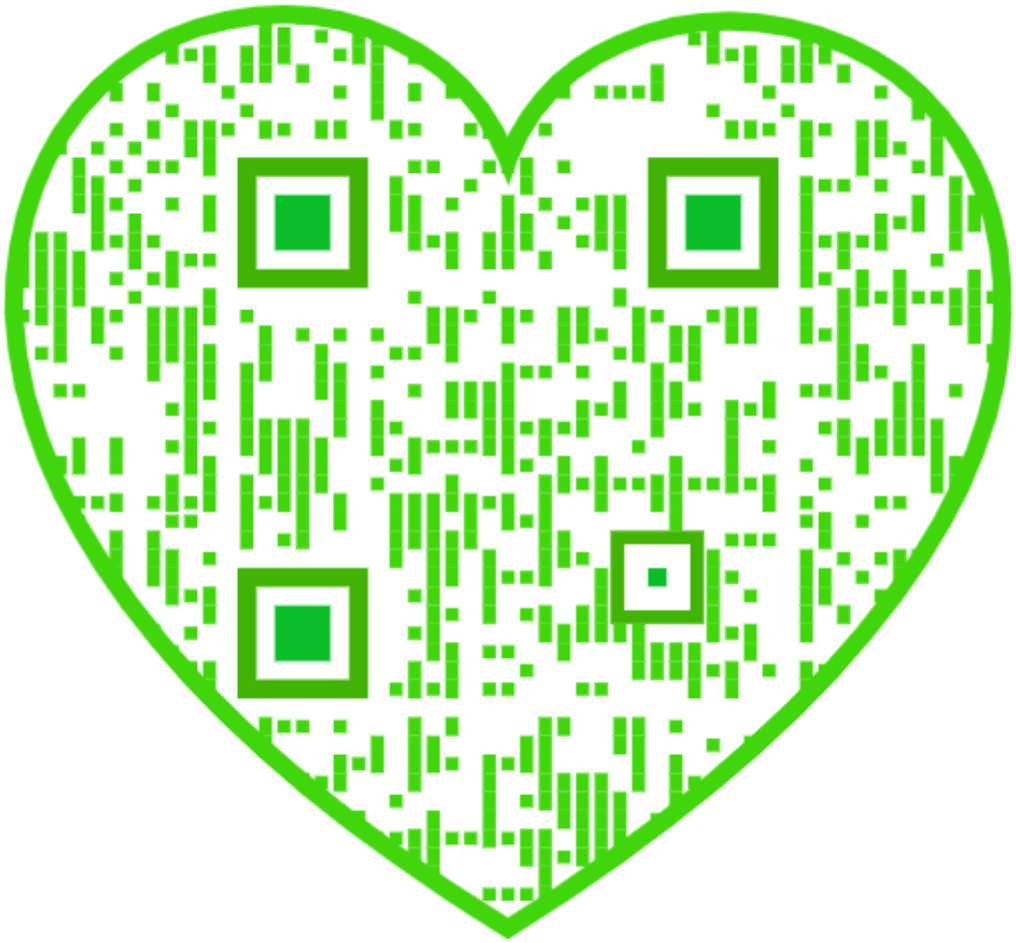
GV
185
172



LIBRARY OF CONGRESS.
Chap. GV. Copyright No. 1185
Shelf. A72
UNITED STATES OF AMERICA.

1 L. L.

ARCHERY

NEW YORK:
ORANGE JUDD COMPANY,
245 BROADWAY.

ARCHERY IN SETS.

Heretofore a satisfactory outfit of Archery, owing to the goods having to be imported, has cost so much that many have been prevented from engaging in this sport. We give below, for the benefit of our friends, a series of sets, with prices, which will show what may be had for a given sum in each case.

No. 1.—Set for THE CHILDREN.

1 3 ft. Bow, Second Growth Ash, Varnished, Japan Center, and Nickel-Plated Tips;

½ Dozen Arrows, 16 in. long, Two Hair Cloth Wings, Brass Points and Nocks, Varnished;

1 Target, 12 in. diameter, Extra Quality;

¼ Dozen Paper Target Faces, Finely Finished;

1 Target Stand, 3 ft. high, Plain Varnished Wood, White Ash;

1 Quiver and Belt, Nicely Finished;

Arm Guard, and 1 Set of Finger Tips;

¼ Dozen Fine Bow Strings.

These will be sent by Express on receipt of $7.00, *If Bow, Arrows, and Target only are wanted, they will be sent for* $2.75.

No. 2.—Set for THE YOUNG FOLKS.

1 Fine 4 ft. 6 in. Bow, Second Growth Ash, Stained and Polished, Nickel-Plated Center and Tips;

½ Dozen Arrows, 24 in. long, Two Hair Cloth Wings, Brass Points and Nocks, Stained, Striped, and Varnished;

1 Target, 21 in. diameter, Extra Quality;

¼ Dozen Paper Target Faces, Finely Finished;

1 Target Stand, 4 ft. 6 in. high, Plain Varnished Wood, White Ash, Folding Legs; 1 Quiver and Belt, 12 in. long; Arm Guard and Set of Finger Tips;

¼ Dozen Fine Bow Strings.

These will be sent by Express on receipt of $9.75. *If Bow, Arrows, and Target only are wanted, they will be sent for* $5.25.

No. 3.—Set for THE WHOLE FAMILY.

1 Bow, 3 ft., Second Growth Ash, Varnished Japan Center, and Nickel-Plated Tips;

1 Bow, 4 ft. 6 in., Second Growth Ash, Stained and Polished, Nickel-Plated Center and Tips;

1 Bow, 5 ft. 6 in., Self-Lance Wood, Highly Finished, Nickel-Plated Center and Tips;

½ Dozen Arrows, 20 in. long, Two Hair Cloth Wings, Brass Points and Nocks, Varnished;

½ Dozen Arrows, 24 in. long, Two Hair Cloth Wings, Brass Points and Nocks, Varnished;

½ Dozen Arrows, 28 in. long, Two Hair Cloth Wings, Nickel-Plated Points and Nocks, Highly Finished;

2 Targets, 36 in. diameter, Extra Quality;

1 Target Stand, 4 ft. 6 in. high, Plain Varnished Wood, White Ash, Folding Legs; 1 Target Stand, 5 ft. 6 in. high, Plain Varnished Wood, White Ash, Folding Legs; ¼ Dozen Assorted Quivers and Belts, Fine Quality;

¼ Dozen Arm Guards, and ¼ Dozen Finger Tips;

½ Dozen Paper Target Faces; ½ Dozen Fine Bow Strings, Assorted.

These will be sent by Express on receipt of $29.00.

No. 4.—Set for THE ARCHER.

1 Bow, 6 ft. long, Self-Lance Wood, Highly Finished, Nickel-Plated Center and Tips, Weight [the power required to draw] from 35 to 50 pounds;

1 Dozen Arrows, 28 in. long, Three Hair Cloth Wings, Nickle-Plated Points and Nocks, Ebonized and Gilt;

1 Target, 42 in. diameter, Extra Quality;

½ Dozen Oil Cloth Target Faces, First Quality;

½ Dozen Paper Target Faces, Finely Finished;

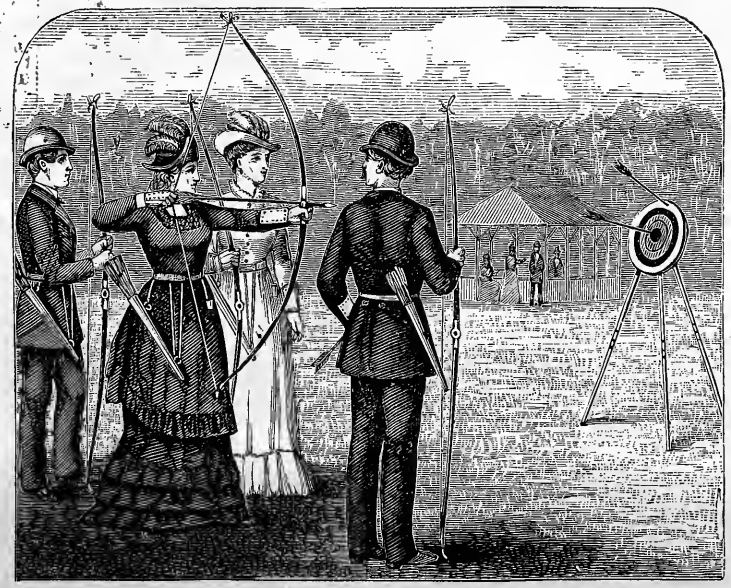
1 Target Stand, 6 ft. high, Painted, Striped, and Varnished, White Ash, and Folding Legs; 1 Quiver and Belt, 16 in. long; Arm Guard and Finger Tips;

1 Dozen Fine Bow Strings.

These will be sent by Express on receipt of $35.00.

It will be remembered that we have made up the above sets simply for the convenience of our patrons. They can of course be varied, to suit the wishes of the purchaser, and sets can be supplied costing from $3.75 *to* $75.00.

ORANGE JUDD CO., 245 BROADWAY, N. Y.



THE ARCHERY.

15
75-51

NEW YORK:
ORANGE JUDD COMPANY,
245 BROADWAY.
1879.

GV1185
.A72

Entered, according to Act of Congress, in the year 1879, by the
ORANGE JUDD COMPANY,
In the Office of the Librarian of Congress, at Washington.

THE ARCHERY.

WHAT EXERCISE DO YOUR BOYS AND GIRLS TAKE?

There are Gradgrinds of both sexes who may say that "my boys get enough exercise in doing the chores all the year, and as soon as spring opens they can get it behind the plow and harrow, or, later, in the hay and harvest fields; they are tired enough with the exercise of their work." As to the girls, it may be said: "The daily routine of the house, the sweeping and dusting, the table setting, and the dish-washing, give a plenty of exercise; but if they need any more they can help on washing days, and find a use for all their strength."—We would not say that the ideas implied in these answers are the rule, but that it is far too generally the case that mere work is looked upon as exercise, and that it will at all answer for or accomplish the purpose of exercise as recreation. For exercise to be beneficial it must not only be of a kind unlike the usual daily occupation, but it must have the co-operation of the mind. Mere muscular movement, that is not work, but made solely for exercise, without engaging the mind also, is of very little use. Many years ago the writer lived in the city, and in that portion of it where there were numerous (and very high-priced) schools for young ladies. In these schools a part of the regular programme was the morning and afternoon walk. These girls went out in pairs, the youngest in front and marshalled by two or more teachers. One teacher at the

"head of the column" regulated the pace, the other at the rear kept an eye on all in front of her. To see these poor girls, each pair at a stated distance from the pair in front, and fated to look at their shoulders—for looking to the right or left would be seen by the "rear guard" and reported at headquarters; to watch them as they moved along at a snail's pace—the pace governed by that of the smallest child—up one street and down the other, and back home—this done morning and evening, day in and day out—seemed to us a most melancholy burlesque upon exercise, and was probably as near the real thing as the mental cramming which the poor girls received was to education. If those girls could have had only a city back-yard where they could have taken exercise as they pleased without the horrid formality of these walks—what a difference. We hold that exercise is of little value which works the body and neglects the mind. The side-walk promenades referred to presented only so many squares to be walked around. Suppose that the same distance had been accomplished in the country, with at the end a locality where Bluets, wild Violets and Spring Beauty could be gathered! It being admitted that the mind must be concerned as well as the body, if we would have useful exercise, the question presents itself how can this be best accomplished. The utility of rambles, with flowers as the object, has been alluded to, and other branches of natural history offer the same advantages. But it is desirable to have exercise and recreation nearer home; something that requires little or no preparation, and at the same time something in which the boys and girls (both old and young), and those of the neighbors, too, if need be, may join. It was because it offered all these that Croquet acquired its popularity so suddenly, and retained it so long. It not only is a social exercise, but, in requiring some skill, occupied the mind in the endeavor to accomplish something

—to get the better of the opposite players. But, like all good things, Croquet has had its day, and there is a desire for something new. In England, the leading out-door games, besides Croquet, are Lawn Tennis and Archery. Lawn Tennis, probably for the reason that it requires considerable preparation and some one who knows the laws of the game to instruct others, seems to have taken very little foothold in this country. Archery, on the other hand, is yearly increasing in popularity. As affording exercise for both body and mind—as being a social game, admitting of any number of participants — as a home game, one that is possible on the lawn, or elsewhere close at hand —as a game for which the outfit is not costly—it, in fact, meets every possible requirement. As a family game that shall furnish recreation, that shall

be as far removed from work as possible; and to be participated in because, and for that reason only, it is a most desirable exercise for both body and mind. The kind of exercise afforded by the use of the bow is unlike that in most other out-door amusements. It brings into play the muscles of both arms, aids in developing the chest, and leads to an erect and graceful carriage of the body. An archery party (see frontispiece) is attractive to the spectators, as the outfit and the positions taken by the players are exceedingly picturesque and pleasing. We have frequently referred to the mental exercise, holding that to be quite as important as the other. Archery affords this in an unusual degree, for, besides the excite-

OLD STYLE BOW, STRUNG.

ment of rivalry, the desire to excel another, the conditions of success must be considered, and this will lead those who desire to excel to consider under what conditions the best shots are made. Besides this, while Archery is now merely a game, it was formerly an art. The history of the bow, not only as a weapon of war, but as the only one used in the hunt, opens up an interesting period of time, and those so inclined will find the an-

OLD STYLE BOW, UNSTRUNG.

nals of Archery most attractive. In view of the revival of Archery—in fact, it promises to be the coming home exercise or game—a number of persons have been at work devising new and attractive forms of the bow, arrow, and other accessories. Several of these new designs in Archery have been presented to the Orange Judd Company, no doubt because they are widely known as agents for

Crandall's Blocks, the most popular toys of the age. One of these new styles of Bows and accessories—that invented by Wright & Thorne—seemed to possess so many novel and useful features that they have undertaken the

NEW STYLE BOW, STRUNG.

sale of them. The particulars in which the bow—of course, the most important part of the outfit—differs from other bows, will be seen in the engravings on pages 8 and 9. We may suggest, besides the home exercise of Archery—and we believe in home amusements before all others—the formation of Archery Clubs, to

NEW STYLE BOW, IN SECTION.

meet at stated times, to adopt some simple uniform, and to exercise for some inexpensive prize. Such clubs greatly conduce to good feeling, and as they create a community feeling, make better neighbors. Let our young people —yea, let all—try Archery.

ARCHERY, PAST AND PRESENT.

Before man learned to till the soil, he lived as a herdsman, and before he learned to tame animals, he lived as a hunter. In this stage of civilization he was wholly dependent on the bow for his food and for his safety. The hunting stage, however, though low in the scale of civilization, is by no means identical with savage life. Many of the native Indian tribes of America were hunters when first discovered, and yet, their life showed, in many important points, a considerable degree of organization. Moreover, a most remarkable progress may be observed during the hunting stage itself, marked out by the invention of the bow. The bow was not the first weapon with which man hunted. Before he had the bow, he used the sling. But the most superficial comparison between these two weapons shows the distance between them. With the sling man is still at war with nature; with the bow the victory is won, and he begins to command. The first feeling of freedom, the first vague idea of something higher than killing an animal and eating it, man owes to the bow. The sling was only a device, though cunning enough; the bow is an instrument capable of improvement. From its first crude form to its most perfected shape, it has run through a long series of changes, and the observations and reflections which called forth these improvements, mean, perhaps, a good deal more in the history of the human race, than the bow itself. As a rule, the idea is worth ten times more than any of its individual realizations; the invention of the telegraph is a very small thing, in comparison with the discovery of electro-magnetism. By degrees as man rose from the hunting to the herding, and from the herding to the tilling stage; the bow ceased to be his only, or even his prin-

cipal means of subsistence. But while the sling and other such rude contrivances were thrown aside and forgotten, or made into mere playthings, the bow, the first real instrument man invented, and by itself, as important an invention as the yoke and the plow, was retained, and in the much more complex organization which life now assumed, it was set apart as the means of safety. The patriarch had in the tribe which he led, a number of men skilled in archery, not to watch the flocks, but to guard and defend the whole family, and in the very midst of the patriarchal tribe, this first germ of modern society, we see the archer gradually develop into the soldier, with all those instincts of courage and ambition, of magnanimity and pride, which naturally awaken in him, whose duty it is to protect the weaker. For a long time the history of archery is the history of soldiery, and though new means, both of attack and defence, were discovered, the archer continued to form one of the principal constituents of an army up to the time of the invention of gunpowder. In the Assyrian and Egyptian representations of battle scenes, made thousands of years before our era, the archer is the principal figure. In classic mythology, the brightest and loftiest ideals of divinity, Apollo and Cupid, are represented with bow and quiver. In the oldest historical records we have, the Old Testament and Herodotus, no battle is described without mention being made of the darkening clouds of arrows. Often one good archer was reckoned more worth as an ally, than a thousand common fighters. When the Norwegian king, Olaf Trygvason, was attacked at Svold, 1000 A.D., by the Danish and Swedish kings, he trusted most to his ship, the largest ever seen in the northern seas, but next to Einar Tambeskjelver, the most famous Scandinavian archer. Einar stood behind him and every time he heard the ring of Einar's bow, he felt his strength grow stronger, for he knew that there now was one foe less.

But suddenly he heard a singular crash or smash. "What is it?" he cried. "It was the Kingdom of Norway which fell out of thy hand," answered Einar, and showed him the bursted bow. In this strain history goes on, far down in the middle ages. Whenever there is a battle,

> "At once ten thousand bow-strings ring,
> Ten thousand arrows fly!"

Yea, during the retreat from Moscow, in 1814, the French army was much harrassed by a corps of Tartar archers from the interior of Asia, and several times thrown into panic, as for instance, in the battle of Krasnoi, because the Tartar's arrows dropped into the French ranks from beyond the reach of a musket bullet.

It was especially in England that archery was cultivated during the middle ages, and several of the most brilliant battles which the English people have fought, were won by its archers. The French early adopted the cross-bow, an awkward attempt to make a shot gun without gunpowder, but the English steadily clung to the long-bow. It became something almost sacred to them, and from the pulpit Latimer pronounced the art of archery a "singular benefit of God." The government did everything in its power to encourage the practice. Edward IV. ordered that every man should keep a bow of his own hight, made of ewe, wych, hazel, ash, or awburne, according to his strength; that shooting-matches or shooting-exercises should be held in every parish on every feast-day, and that every man of the parish, between fifteen and fifty years, should make a certain number of shots on these days, under penalty of a fine, etc. Even under Henry VIII. every man between sixteen and sixty, excepting ministers and justices, was, by law, compelled to keep a bow and arrows, and care was taken that the fields in the vicinity of London should not become so enclosed or overgrown by trees as to embarrass the practising. Under

such circumstances it is not to be wondered at that it should be England which produced the poetical hero of archery, Robin Hood. The real Robin Hood might, perhaps, not be exactly to our taste; he was an outlaw, a robber, a murderer, and the chief of a gang of men who all resembled him more or less. But what of violence and coarseness there may have characterized the outlaw, it has been forgiven and forgotten, and only that which characterized the mythical hero, his rough sense of justice, his sympathy with the poor, his magnanimity towards the weak, has been remembered. More has been added by imagination, until his life has become a complete myth, and such as he now lives in the "Garland of Ballads," he is the incarnation of the poetry of archery. He was born in the reign of Henry III., about 1225, at Loxley Chase, near Sheffield, in Yorkshire, and he is said to have been born an Earl of Huntingdon. When he was fifteen years old he went one day to Nottingham to "dine with the general," but on the road he fell in with fifteen old foresters. Half in mockery, the foresters proposed to make a bet about who would make the best shot with his bow, and when Robin won the bet they refused to pay, and provoked him with their impertinence and harsh threats. Enraged he drew his bow and shot them down, all fifteen, one by one. They were buried in the cemetery of Nottingham, in a long row, but the people of the city stood up and pursued the murderer. Robin now took to the woods, Sherwood Forest, in the County of Trent. This region was well known for its rebellious spirit. Since the days of the conquest it had always had its outlaws, and a number of such desperadoes soon gathered around the Earl of Huntingdon as their acknowledged head. "You need not be over anxious," he said to them, "for we shall do well enough. See that you do no harm to any husbandman that tills with the plough, nor to any good yeoman, nor

to any knight or squire that is a good fellow ; but bishops and archbishops, those rich ecclesiastics that live upon the fat of the land, and subsist by plundering the poor, you may beat and bind them. The High Sheriff of Nottingham too, you may bear in mind, for he is no friend of any of us." What part Robin Hood took in the political feuds of his time, and how much truth there is in his adventures, can only be conjectured, but the freshness and humor of the bright sunshine, in the open air, and the romantic fascinations of the twilight and stillness of the summer forest, always accompany him from ballad to ballad, and do not leave him even at the door of death. He died as the victim of some despicable treachery, of course. But before he died, he roused himself, and made one more mighty shot, and there, where the arrow fell, "there you shall bury me."

After the time of Henry VIII., archery rapidly declined in England, and when the musket was adopted for the infantry of the army, the yeomen began to neglect the bows, and the public shooting-grounds, with their butts and other accoutrements, disappeared. As a sport, however, archery still retained its hold on the interest of the English people. Archery societies were formed and prospered. Their shooting-matches belong to the most brilliant social gatherings in English life, and though these societies naturally have assumed a somewhat exclusive character, they enjoy, nevertheless, great popular favor and command a good deal of interest. When, in 1792, Mahmud Effendi, Secretary of a Turkish Embassy to the Court of St. James, shot one arrow four hundred and fifteen yards against the wind, and another, four hundred and eighty-two yards with the wind, in a field behind Bedford House, London, before the members of the Royal Toxophilite Society, the feat immediately became the talk of the day all over England. The oldest of these societies is the "Royal Edinburgh Archers." It

was founded in the reign of James I., and holds a royal charter which forms its members into the king's body-guard as soon as he comes within five miles of the city of Edinburgh. It numbers more than one thousand members, and its annual shooting-match is a magnificent display, the members marching to the ground through the streets of Edinburgh, under their own colors, presented to the society in 1832, by his majesty, and preceded by their own symbol, a huge bow, from whose one corner the royal purse is suspended. The nominal prize contended for is the "Archer's Bowl," a great silver bowl which is kept in the Archers' Hall, and on which the name of the winner is engraved. The real prize is a purse of twenty guineas furnished by the crown, for which the winner is expected to buy some piece of plate decorated with archery ornaments. The "Woodmen of the Forest of Arden," also a very old society, was the first to invite ladies to become active members, an idea which very soon was adopted by other societies, as, indeed, the archery ground gathers the two sexes together under much more pleasant and much nobler auspices than either the ball-room or the drawing-room. The "Woodmen of the Forest of Arden," have three prizes exclusively for ladies, and so have several of the other societies. The "Royal Toxophilite Society" was founded in 1781, by Sir Ashton Lever, and is presided over by the queen. It owns a magnificent banqueting hall, and large and beautifully ornamented grounds. Also, in America, where it has only recently been introduced, archery has found much favor. Clubs and societies have been formed all over the country, and several of these young institutions, such as the "Wabash Merry Bowmen," and the "Staten Island Club," number celebrated archers among their members. At once democratic and refined in its character, an easy but vigorous exercise, archery is destined to become the national sport of America.

THE TOOLS AND THEIR USE.

The complete outfit of arms and gear for an archery sporting trip, consists in a bow with cover, a dozen arrows with quiver, a tassel, grease-pot, bracer, shooting-glove, and some strings in reserve, and a target with stand and scoring book. Let us examine each of these items by itself.

1.—THE BOW.—*See Engravings, pages* 8 *and* 9.

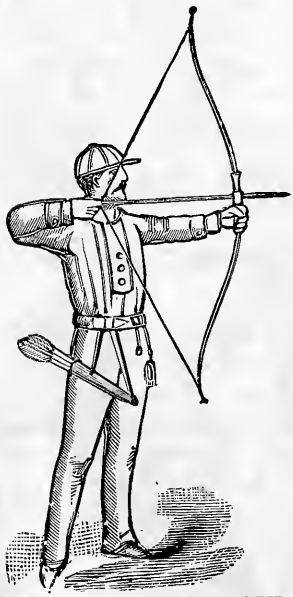
How to Choose a Bow.—Of course, every one who buys a bow, wants to get a good one. Of this point, old Roger Ascham, who wrote his book on archery in 1545, at a time when archery experience was still a general and living thing, says: "Therefore shall I tell you some fakens in a bowe that you shall be the seeldamer deceyved. If you come into a shoppe and fynde a bowe that is small, long, heavy and strong, lying streyght, not windyng, not marred with knot, gaule, or windeshake, even, freate or pynche, buy that bowe of my warrant," and that is about all that can be said. If the wood shows clear and sound through the polish, without any scratches or suspicious blotches, the bow is probably good. The most fatal fault in a bow is a freate, but though freates cannot be cured, they can be avoided, for they are always indicated by a blotch, and they generally start from a scratch. There is one point, however, to which the young archer should pay due attention when choosing a bow, and that is, to get one which in power corresponds with his own strength. The lightest lady's bow draws twenty-five pounds; the

bow with which Mahmud Effendi made his famous shot before mentioned, drew one hundred and sixty pounds; the difference is very great. Generally the number of pounds a bow draws is inscribed on its innerside near the handle, and the numbers most commonly used are those about thirty-five to fifty. But it is better to have a bow which is a little too weak, than to have one which is a little too hard, for the length to which a bow will throw an arrow does not depend upon its power alone. It depends also upon the firmness, swiftness and pluck with which the bow is drawn; and in practising, a bow which is too hard, presents an additional and entirely unnecessary difficulty.

Construction of the Bow.—The so-called self-bows, consists of one single piece of wood, measuring six feet from notch to notch of the horn tips, and it is said to be less liable to break than the common bow. The common bow consists of two pieces of wood, the two limbs, of which the upper limb is a little longer than the lower. These two pieces of wood are dove-tailed into each other by deep saw-tooth notches and then glued together; and the connection is still further secured by a tight wrapping of hemp, over which the plush handle is finally glued, so that the upper edge of the handle falls exactly in the center of the bow. The flat outerside of the bow is called the back, the rounded innerside the belly, and a backed bow means one whose outerside is strengthened throughout by an additional layer of another kind of wood. The imported bows are generally made of lemonwood, lancewood, yew, or snakewood; our domestic bows, of imported lancewood, mulberry, sassafras, southern cedar, locust, walnut, elm, or ash. A bow of snakewood backed with hickory is considered a particularly fine instrument, the snakewood giving elasticity and springiness, the hickory, toughness. But a backed bow is very liable

to break when the string happens to burst, because the sudden recoil affects the two kinds of wood differently on account of their different amount of elasticity.

The Old Bow and the New.—The weak point in this bow, just described, is the handles, where the limbs are joined together. The heat and perspiration of the hand cause the glue to dissolve and a break ensues. In the self-bow, however, this danger is much less and it may be prevented altogether by putting on a glove. But there is here another difficulty which it has proved much harder to overcome; the spring which drives the arrow, moves in the exact direction of the center of the bow. But the arrow does not pass the center of the bow, but by the side of it. Hence a curve is produced in the very starting of the arrow, and to take due account of this curve, is one of the greatest difficulties in archery. It has always been felt thus, and from the oldest times attempts have been made to obviate it. In Assyrian and Egyptian representations of archers, in Greek bas-reliefs and statuaries, we meet with the most singular constructions of bows, bows with straight center-piece and the limbs curiously bent in the shape of wings, etc., and it is evident that this weakness and difficulty of the center of the bow was very vividly felt. The idea was, of



SHOOTING WITH THE IMPROVED BOW.

course, to have the center-piece as strong as possible by making it of metal, and at the same time make it as slender as possible in order to bring the arrow nearer the plane of sight. It seems, however, that the improved bow, patented by Messrs. Wright and Thorne, and introduced by the Orange Judd Company, has succeeded in solving the problem; the center-piece is here made of metal, and, as the illustration shows on opposite page, this arrow is thereby made to pass through a fixed bearing in the center of the bow, starting immediately in a straight line without any curving. Another great advantage with this bow, is, that being made in sections, it is easier to pack and carry, and if any part of it should happen to break, a small expense is only required to replace it.

How to String the Bow.—When not in use, the bow should always be kept unstrung; else it will settle in the

BOW, UNSTRUNG.

deeper curve and lose in power and springiness. When about to string, or as it is called, to brace the bow, grasp the handle with the left hand, the back of the bow turned towards you; place the lower tip securely on the ground leaning firmly against the inner side of the left foot, so as not to slip; lay the heel of the right hand on the back of the upper limb, with the thumb and fingers just below the eye of the string; pull the handle towards you with the left hand and push the upper limb from you with the right hand, and while the bow is thus bending, let the eye of the string smoothly slide into the notch. When strung, hold the bow perpendicularly in front of you, to see whether the string falls exactly in the place of the center of the bow. If it does not, fix it by changing its position at the notches. When unstringing the bow, hold it in exactly the same position as when string-

ing it, and when the eye of the string gets loose, slip it out of the notch and let it slide down the upper limb as far as the green band, drawn through the eye and a small hole in the upper tip, will allow.

How to Preserve the Bow.—As a good violin grows better by being played upon, and a good violinist plays best on his own fiddle, so a good bow becomes better by being shot with, and a good archer shoots his best by his own bow. There is much in thoroughly knowing the individual instrument we are using, and, if the ballads are to be relied upon in this particular case, a peculiar intimacy is apt to grow up between the bow-man and his bow. In his hand it will do what it will not do in anybody else's hand, as if there were a sympathetic correspondence between the tension of its fibres and the tension of his muscles, as if it knew him as well as he knows it. But would it not be a pity if a bow should begin to decay the same day the bow-man began to understand it, and break to pieces the same day it had become dear to him. At all events, what is worth having, is worth preserving, therefore, keep the bow away from the damp air of the hall-way and the heat of the parlor fire. Wipe it perfectly dry, when it has become wet. Rub it with the hand or treat it to a little beeswax before bracing it in frosty weather. When not in use, keep it always in its green baize bag, to shelter it against scratches. With the scratch comes the freate, and when the freate has come, ruin is only a question of time.

2.—The Arrow and the String.

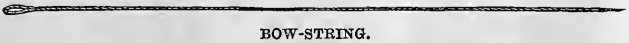
The Arrow.—The wooden shaft of an arrow is called the shele, and is provided at the one end with a notch, fitting the bow-string, and cut either in the wood itself or in a piece of horn or metal nock set into the shele, and at the other end with a blunt steel cap, called the pile, for

target shooting, or a flat, barbed point for hunting. The shele should be about twenty-eight inches long, and about one-third of an inch in diameter, perfectly straight, and made of hard wood. One of the most important features, however, of the arrow, is its feathering. Three rows of feathers are placed longitudinally on the notch-end of the shele, beginning about one and a quarter inches from the notch, at equal distances from each other, but so that one

ARROWS.

of them, the so-called cock-feather, that one which, when shooting, is turned out from the bow to the left, forms right angles with the notch. The task of the feathers is to steady the flight of the arrow, just as that of the rudder is to steady the course of the ship. A ruffled or spoiled feathering cannot fail, therefore, to impair the shot, and as the old method of feathering an arrow from the vane of a goose quill has proved very inconvenient, on account of the feathers being so easily injured, the Orange Judd Company have, among their other improved archery goods, introduced an arrow feathered with a peculiar kind of fine hair cloth made specially for this purpose. It lasts much longer and has exactly the same effect.

The String.—Bow-strings are made of hemp or flax, and come from the manufacturer provided with a loop or



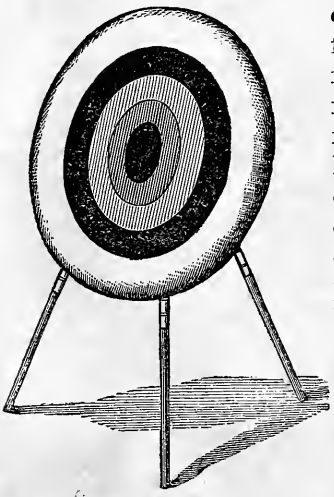
BOW-STRING.

notch at the one end, and wrapped for about six inches in the middle with thread or silk, in order to prevent this part of the strings from being worn out by the notch

of the arrow, the fingers, or the baize. When the bow is strung, that part of the string should be found which is exactly opposite to the center of the bow, and often worked with a red-colored silk thread, in order to be always used as the notching place of the arrow. If a string begins to fray in some spot, the place should immediately be wrapped over with thread or silk, and well waxed, and if the string shows signs of giving way, it should immediately be removed. The sudden recoil caused by the bursting of the string is very liable to break the bow, especially a strong-backed one.

3.—The Target and Minor Tackle.

The Target.—A target is a circular disk made of straw and covered with canvass. The diameter varies with the distance, from one foot for fifteen yards, and two feet for twenty yards, to three feet for forty yards, and four feet for fifty or one hundred yards. The front cover is painted with four equal rings around the gilded center or the gold, respectively colored red, blue, black, and white. The gold scores nine points, the red seven, the blue five, the black three, and the white one. To the target belongs an easel or stand on which to place it. Also, with respect to the target and target-stand, the improved



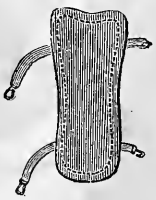
TARGET.

TARGET-STAND, FOLDED.

archery goods of the Orange Judd Company have combined valuable improvements, making the target-disk of coarse Excelsior, and the target-stand to fold up, which makes them much more convenient to carry.

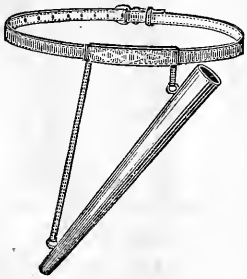
The Shooting-Glove.—The shooting-glove consists of three thimbles of stiff, smooth leather, made by means of elastic stitches to conform perfectly to the size of the fingers, and held in proper position by strips of soft leather gathered by a wristband around the wrist. The office of this shooting-glove is to protect the three fingers of the right hand with which the string is drawn. But any glove will do the same work, and no glove is, of course, the best, if the fingers can stand the wear of the string.

The Bracer.—The bracer, or arm-guard, is a piece of heavy, but highly polished leather, fastened by means of elastic bands around the wrist and forearm of the left arm which holds the bow, in order to protect it from the very heavy blows of the string when let loose. The bracer is not a piece of over-refinement or effeminacy, but absolutely necessary, as the young archer soon will recognize, and the archers of old times were often exceedingly prodigal in the ornamental outfit of their bracers.



The Quiver.—The quiver is a hollow tube, closed at the lower end, made of tin or leather, and destined to hold three or four arrows. It is suspended to the belt, and worn conveniently on the back to the right, with the arrow-heads pointing forwards. To the belt is also suspended a small cup of ebony or ivory, containing a composition of bees-wax and lard, with which to treat the

string and the arrow-notch, or even the bow and the finger-tips. The archer's belt, worn around the waist,



BELT AND QUIVER.

TIN QUIVER—GREASE POT.

and his quivers, are, as is easily seen, capable of the most fanciful and artistic ornamentation.

Preparing to Shoot.—With the bow, strung and held by the handle in a horizontal position, take your stand in front of the target, turning the left side towards the target and the face over the left shoulder so as to face the target directly. The position must be erect and free, giving full play to the muscles of the chest, shoulders, and arms. The legs must be firmly planted, with the feet flat on the ground, the heels six inches apart, and the left foot a little advanced towards the target. Place the arrow in the fixed bearing of the center, or, if an old bow is used, in the groove formed by the upper limb of the bow and the first fingers of the left hand. Notch the arrow at the point of the string marked with the red silk-thread, and with the cock-feather turned upwards; bring the bow into a vertical position and raise it in height with the shoulder, keeping the arrow securely in the notching place by holding it between the first and the second finger of the right hand, and drawing the string slowly back with the three first fingers of the right hand. At this moment look at the center of the target,

and not at the bow or the arrow or anything else, and when the attention becomes so concentrated on this one point that the center of the target is the only thing you distinctly see, then draw the string until you feel the thumb of the right hand at the top of the right ear, when an arrow of twenty-eight inches' length will be drawn to the head, and let go.

The Flight of the Arrow.—In starting the arrow, two things must be taken into consideration; the elevation and the direction. The course of an arrow is parabolic, and when the distance is long, and the bow comparatively weak, a great allowance must be made for the falling of the arrow. A slight elevation must in all cases be given to the arrow, and to manage this point rightly is a matter of long practice and of intimate acquaintance with the bow used. It depends upon a kind of intuition which is one of the principal characteristics of a great archer. The direction may be materially affected by the wind, especially when the arrow is light and strongly feathered, and this too, is a difficulty which cannot be overcome by rules, but must be mastered with that feeling of what is the right thing to do, with that tact which only practice and experience give. Many other things of the same or a similar kind may occur in shooting with the bow. The three fingers with which the string is drawn back, must be placed over the string at a point sideways between the tips and the first knuckle. If too near the tips, the fingers have not strength enough; if too near the knuckle, they cannot slip the string easily enough, but will make it roll, which imparts a singular jerking and unsteadiness to the arrow, called wabbling. The same effect may be produced by notching the arrow a little too high or a little too low; by a slight displacement of the string in the upper or lower notch; by the feathers of the arrow being not perfectly straight, a little ruffled, wet, etc.

Target-Shooting.—In target-shooting, two targets are generally used, called respectively the ends, and placed opposite each other at the distance agreed upon. When each of the shooting party has shot the number of arrows agreed upon, the party advances to the end; the arrows are extracted and noted down in the score-book, and the shooting is now continued from this end, in opposite direction.

Butt-Shooting.—Butts are oblong squares, eight feet long, five feet wide, and seven feet high, built of long sods of turf pressed together and tapering gradually from the bottom to the top. When more than two are wanted, they are arranged in sets, each set consisting of four, placed at a distance of thirty yards from each other, and forming a chain of lengths of thirty, sixty, ninety, and one hundred and twenty yards, but so disposed as not to stand in the way of the archers when shooting at any of the lengths. The mark is a circular piece of thin, white paste-board, fastened by a peg through the middle to the front of the butt, and varying in size according to the distance, four inches in diameter for thirty yards, eight for sixty, etc. Only those shots are scored which hit the mark, and the greatest number wins.

Roving, Flight, and Clout Shooting.—By the first method the archers rove about from place to place, with no fixed target, but shooting at trees or any other object. The distance varies from one hundred to two hundred yards, and all arrows falling withing five bows' length are scored. The winner of the first shot chooses the next, and so on. Flight shooting is simply a trial of distance; the longest shot wins. The Clout is a small white target of paste-board, about twelve inches in diameter, and fastened to a stick stuck into the ground; it is only a form of Roving.

The Ascham.—An Ascham, thus called after Roger Ascham, one of the earliest writers on Archery, means sometimes a small portable case, made of light boards, like a violin case, and destined to carry fine bows and arrows in; but oftener a larger piece of furniture, six and a half feet high, two or more feet broad, and one foot deep, destined to keep all archery tackle in far better preservation.

SCORING CARD.

NAME.	GOLD. 9	RED. 7	BLUE. 5	BLACK. 3	WHITE. 1	HITS.	VALUE.

ORGANIZING ARCHERY CLUBS.

An Archery Association may be made up of any even number of ladies and gentlemen, from two upwards, and all ages, from the youngest to the oldest, may be represented. Its organization can be effected by the election of officers, as follows: a President, Vice-President, Secretary, and Treasurer.

By-Laws can be adopted according to the requirements of the association, and they can of course be varied by the circumstances of the members.

To aid in the organization of an Archery Club, we give the following rules, which will be found very valuable:

1. A Lady Paramount (Captain) to be elected, whose term of office is to be one year.

2. ——— Club meetings to be held each year at the house of the President, unless otherwise appointed. Each member must be promptly at the place of meeting at —— o'clock. Shooting to commence at —— o'clock, and end at —— o'clock.

3. Each member who engages in shooting must appear in the Club uniform.

4. At least five days before each Club meeting, the Secretary shall notify the members of the time and place of meeting through cards, or otherwise.

5. Two prizes for ladies and two for gentlemen shall be shot for at each meeting. One shall be for hits, the other for numbers. No person shall be permitted to take both at one meeting.

6. If a tie occurs for numbers, hits shall settle it; and if a tie for hits, numbers shall settle it.

7. From the decision of the Lady Paramount, there shall be no appeal.

8. At every meeting, one prize shall be offered for strangers.

9. The Club shall have a challenge prize of the value of —— dollars, and to this every winner shall add a commemorative silver ornament.

10. The shooting distance shall be fifty (or —— or ——), and one hundred yards, and —— feet targets shall be used.

11. Each archer shall shoot —— arrows, so marked as to be distinguished from all others.

12. No archer shall exchange bows with another, or shoot with the bow of another, unless his own be broken at the meeting. The penalty shall be the placing in the hands of the Lady Paramount the sum of —— dollars, to be expended for prizes.

13. A deposit of the sum of —— shall be made with the Lady Paramount at each meeting, by each male member, for prizes.

It will be understood that the above rules are given simply as suggestions to those who are about forming clubs, and to aid such in making regulations according to the requirements of their several cases.

REGULATIONS IN SHOOTING.

1. All doubtful or disputed points shall be determined by the Lady Paramount.

2. The committee may appoint a gentleman who shall call up the shooters, and direct as to the spot where they shall stand. To overstep the mark, or fail to answer the call, shall involve the loss of one's turn; shooters to file to the right after shooting, and the next in order to take the vacated place.

3. Each target shall be in charge of a marker designated for that duty, and he alone shall remove the arrows, and call their value, and their owners' names.

4. Every shooter shall have his arrows distinctly marked.

5. The following shall be the reckoning of the score: Gold, 9; Red, 7; Blue, 5; Black, 3; White, 1. When an arrow cuts the line between two colors, it shall count the highest; the prize to be taken by the highest score.

6. The Club shall regulate the distances at which the targets shall be pitched.

7. It is customary, and desirable in shooting, to have one target at each end of the ground, instead of one alone. The convenience of such an arrangement is obvious.

PRICE-LIST OF BOWS.

ALL WEIGHTED.

Second Growth Ash, Varnished, Japan Center, and Nickel-Plated Tips.

No. 1, 3 ft. 0 in.....$1.00	No. 5, 5 ft. 0 in..... ..$2.00
No. 2, 3 " 6 " 1.25	No. 6, 5 " 6 " 2.25
No. 3, 4 " 0 " 1.50	No. 7, 6 " 0 " 2.50
No. 4, 4 " 6 " 1.75	No. 8, 6 " 6 " Extra Heavy... . 3.00

Second Growth Ash, Stained and Polished, Nickel-Plated Center and Tips.

No. 9, 3 ft. 0 in.. ....$1.50	No. 13, 5 ft. 0 in..... . ..... $2.50
No. 10, 3 " 6 " 1.75	No. 14, 5 " 6 " 2.75
No. 11, 4 " 0 " 2.00	No. 15, 6 " 0 " 3.00
No. 12, 4 " 6 " 2.25	No. 16, 6 " 0 " Extra Heavy..... 3 50

Self-Lance Wood, Highly Finished, Nickel-Plated Center and Tips.

No. 17, 3 ft. 0 in.... . .....$2.00	No. 21, 5 ft. 0 in..... $4.50
No. 18, 3 " 6 " 2.50	No. 22, 5 " 6 " 5.25
No. 19, 4 " 0 " 3.00	No. 23, 6 " 0 " 6.00
No. 20, 4 " 6 " 3.75	No. 24, 6 " 0 " Extra Heavy..... 7.00

The length, as above given, **does not include** the metallic center-piece, which is about 6 inches long.

Each of the above varieties are packed in a neat hinge-cover box containing ¼ doz. Bows. Price of box, 12½ cents.

ARROWS.

ALL LOADED.

	Per Doz.
No. 1.	
12 in. 2 Hair Cloth Wings, Brass Points & Nocks, Varnished, Price..... ..	$2.25
16 " " " " " "	2.50
20 " " " " " "	2.75
24 " " " " " "	3.00
28 " " " " " "	3.25
No. 2.	
16 in. 2 Hair Cloth Wings, Brass Points & Nocks, Stained, Striped, Varnishd,	$3.25
20 " " " " " " "	3.50
24 " " " " " " "	3.75
28 " " " " " " "	4.00

50 cents extra charge for Nickel-Plated Points and Nocks.

No. 3.	
20 in. 2 Hair Cloth Wings, Nickel-Plated Points & Nocks, Highly Finished.	$4.00
24 " " " " " "	4.50
26 " " " " " "	5.00
28 " " " " " "	5.50
No. 4.	
20 in. 2 Hair Cloth Wings, Nickel-Plated Points & Nocks, Ebonized & Gilt,	$4.50
24 " " " " " "	5.00
26 " " " " " "	5.50
28 " " " " " "	6.00

If three or four winged arrows are desired, an extra charge of 50 cents per dozen will be added to the above prices.

[SEE NEXT PAGE.]

TARGETS.

12 in. Diameter, Extra Quality (See Description), each	$0.90
15 " " " " "	1.10
18 " " " " "	1.35
21 " " " " "	1.75
24 " " " " "	2.10
27 " " " " "	2.50
30 " " " " "	3.00
33 " " " " "	3.50
36 " " " " "	4.00
39 " " " " "	4.50
42 " " " " "	5.00
48 " " " " "	5.50

Oil-cloth Target Faces, first quality, one-fourth above prices.
Paper Target Faces, finely finished, one-sixth price of target.

TARGET STANDS.

3 ft. 0 in. Plain Varnished Wood, White Ash, without Folding Legs, each	$0.90
4 " 0 " Plain Varnished Wood, White Ash, Folding Legs, each	1.25
4 " 0 " Painted, Striped, and Varnished, White Ash, Folding Legs, each	1.75
4 " 6 " Plain, Varnished Wood, White Ash, Folding Legs, each	1.50
4 " 6 " Painted, Striped, and Varnished, White Ash, Folding Legs, each	2.00
5 " 0 " Plain, Varnished Wood, White Ash, Folding Legs, each	1.75
5 " 0 " Painted, Striped, and Varnished, White Ash, Folding Legs, each	2.25
5 " 6 " Plain, Varnished Wood, White Ash, Folding Legs, each	2.00
5 " 6 " Painted, Striped, and Varnished, White Ash, Folding Legs, each	2.50
6 " 0 " Plain, Varnished Wood, White Ash, Folding Legs, each	2.25
6 " 0 " Painted, Striped, and Varnished, White Ash, Folding Legs, each	2.75

We also manufacture other archery goods, *not patented*, and guarantee them to be equal, if not superior, to any other in the market, and at lower prices, viz.:

QUIVERS AND BELTS.

Youths' and Misses',	No. 1, 12 inch	$1.00
" "	No. 2, 12 "	1.50
" "	No. 3, 12 "	2.00
Ladies'	No. 1, 15 "	1.50
"	No. 2, 15 "	2.00
"	No. 3, 15 "	2.50
Gents'	No. 1, 16 "	1.75
"	No. 2, 16 "	2.25
"	No. 3, 16 "	2.75

Arm Guards.....No. 1, 75c. No. 2, $1.00. No. 3, $1.25.
Gloves or Finger Tips, No. 1, 75c. No. 2, $1.00. No. 3, $1.25.
Fine Bow Strings, 20, 25, 30 and 35 cents each.

☞ LIBERAL DISCOUNTS WILL BE MADE TO THE TRADE.

ORANGE JUDD COMPANY, General Agents,

No. 245 BROADWAY, NEW YORK.

[SEE PREVIOUS PAGE.]

LIBRARY OF CONGRESS
0 020 237 106 1